

## ORIGINAL ARTICLE

# THE ROLE OF HYPERLACTATEMIA STATUS AS A PROGNOSTIC PARAMETER IN CRITICALLY ILL NENONATES

A. Dwi Bahagia, Ema Alasiry, Djauharia A.M, Hanna Kurniawati

*Pediatric Department, Faculty of Medicine, Hasanuddin University Makassar, South Sulawesi, Indonesia*

### Corresponding author:

Andi Dwi Bahagia

Pediatric Department, Faculty of Medicine, Hasanuddin University

Jl. Perintis Kemerdekaan Km. 11 Tamalanrea

Makassar, 90245, Indonesia

Phone: (+62) 81354271651

Fax: (+62 411) 590629

Email: bahagiadwi@yahoo.com

## ABSTRACT

**Introduction:** Hypoxia and hypoperfusion is often found in neonates in an intensive care unit, however the clinical manifestations can only be found after cellular hypoxia and tissue perfusion disorder occur. **Objective:** The study aims to find the ability of hyperlactatemia status as a prognostic parameter for infants in Neonatal Intensive Care Unit Level IIIA. **Methods :** The research was a cohort prospective study using bivariat and multivariat analysis in NICU of Dr. Wahidin Sudirohusodo Hospital from June 2012 to April 2013. The analysis of the lactate level on samples that met the inclusion and exclusion criterias was done immediately after the neonates get into the NICU level IIIA. The capliary lactate level was measured using hand held analyser. The samples were distributed into groups of hyperlactatemia and without hyperlactatemia followed by outcome observation (death or good recovery). The number of subjects were 102 patients consisted of 69 males and 33 females. **Results :** The study showed the incidence of hyperlactatemia at NICU leve IIIA was 53,9%. Hyperlactatemia (( $p=0.000$ ; IK95% 4.11-56.75.00; AOR 15.28) and chronological age <24 hours ( $p=0.014$ ; IK95% 1.50-37.04; AOR 7.47) was significant in determining the patient's outcome. **Conclusions:** The study found that hyperlactatemia status and cronological age less than 24 hours were prognostic factors for patient's outcome related to elevated mortality risk.

**Keywords:** Hyperlactatemia, NICU, Critically ill infants